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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Hitoshi Kitayoshi) Group Art Unit
Serial No. : New Application)
Filed : Concurrently Herewith)
For : FIELD DISTRIBUTION)
MEASURING METHOD AND)

APPARATUS

Examiner : Unknown

PRELIMINARY AMENDMENT

Hon. Commissioner of Patents and Trademarks Washington, D.C. 20231

Dear Sir:

This amendment is submitted for the above-identified patent application which is an entrance application of international patent application No. PCT/JP01/03344 filed April 19, 2001. Please make the following changes.

IN THE CLAIMS:

Please cancel all of the pending claims, Claims 1-10 and add the following new claims, Claims 11-24.

11. A field distribution measuring method for measuring an electric field or a magnetic field by a probe measuring at a plurality of sampling points while continuously sweeping, wherein

a shift amount of the sampling points is computed, based on a spurious spectrum generated by a displacement between a position of the probe and a measuring timing, and a distribution of the

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electric field or the magnetic field is measured in consideration of the shift amount.

12. A field distribution measuring method according to claim 11, comprising:

storing a plurality of measured data measured by the probe sweeping in a first direction together with position information of the probe as reference data;

storing a plurality of measured data measured by the probe sweeping in a second direction opposite to the first direction together with position information of the probe as adjustment data;

interpolating the adjustment data to compute interpolated data with data between the sampling points interpolated;

computing spatial frequency power spectra for the reference data and the interpolated data; and

computing the shift amount of the sampling points, based on the spatial frequency power spectra.

13. A field distribution measuring method according to claim12, wherein

the shift amount of the sampling points is computed based on an accumulated value of the spatial frequency power spectra.

14. A field distribution measuring method according to claim13, wherein

the shift amount of the sampling points is judged, based on a point where the accumulated value of the spatial frequency power spectra is below a prescribed value.

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15. A field distribution measuring method according to claim 13, wherein

the shift amount of the sampling points is judged, based on a point where the accumulated value of the spatial frequency power spectra is minimum.

16. A field distribution measuring method according to claim 14, wherein

the shift amount of the sampling points is judged, based on a point where the accumulated value of the spatial frequency power spectra is minimum.

17. A field distribution measuring method according to claim11, wherein

the shift amount of the sampling points is computed in consideration of acceleration and deceleration of the probe.

18. A field distribution measuring method according to claim12, wherein

the shift amount of the sampling points is computed in consideration of acceleration and deceleration of the probe.

19. A field distribution measuring method according to claim 11, wherein

the probe sweeps on a two-dimensional plane.

20. A field distribution measuring method according to claim 12, wherein

the probe sweeps on a two-dimensional plane.

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21. A field distribution measuring method according to claim 11, wherein

the probe sweep in a three-dimensional space.

22. A field distribution measuring method according to claim 12, wherein

the probe sweep in a three-dimensional space.

23. A field distribution measuring apparatus comprising:

a probe for detecting an electric field or a magnetic field at a plurality of sampling points while continuously sweeping on a plane or in a space;

measuring unit for measuring the electric field or the magnetic field detected by the probe;

storing unit for storing data of the electric field or the magnetic field measured by the measuring unit together with position data of the probe;

data processing unit for computing a shift amount of sampling points generated by a displacement between a position of the probe and a measuring timing, based on data stored in the storing unit; and

computing unit for computing a spatial distribution of the electric field or the magnetic field detected by the probe, in consideration of the shift amount of the sampling points computed by the data processing unit.

24. A field distribution measuring apparatus according to claim 23, wherein

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the data processing unit computes the shift amount of the sampling points, based on a spurious spectrum generated by the displacement between the position of the probe and the measuring timing.

REMARKS

This amendment is submitted to correct forms of the original claims in the above-identified application by cancelling all of the original claims and introducing a new set of claims. The multiple dependency claims as well as the multiple dependency from the multiple dependent claims have been corrected. No new matter has been introduced by this amendment.

Applicant respectfully requests that the amendment noted above be entered before the substantive examination of this case.

Respectfully submitted,
MURAMATSU & ASSOCIATES

Dated: 12/22/2001

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